

REMARKS

Claims 16-41 are pending in this application. Claims 32-35 have been withdrawn from consideration as being directed to a non-elected invention. Reconsideration in view of the following remarks is respectfully requested.

Specification

The Examiner objected to the specification because of a minor informality on page 11, line 20 in which Applicants have referred to a patent application with Applicants' reference instead of its application serial number. Accordingly, Applicants have updated the specification so that it now refers to application serial number 09/551,229.

Claim Rejection – 35 USC § 112

The Examiner rejected claims 16-32 and 36-41 under 35 U.S.C. § 112, second paragraph. The Examiner contends that the structural relationship between the sealing member and the rest of the projection apparatus is not clear. The Examiner contends that the phrase the sealing member disposed "proximate" an object is not clear. The examiner also questions to which structures an "inlet" and an "outlet" correspond in the written description.

Applicants respectfully submit that the language "the sealing member disposed proximate an object" is clear for at least the following reasons. One of ordinary skill in the art would understand the language in claim 1 when reading the specification and in view of the drawings. For example, in one embodiment, the sliding plate 12 (sealing member) is disposed proximate vacuum chamber wall 11 (an object) (see, for example, Figure 2 and related description in page 10 of the specification). In another embodiment, the wall 11 (sealing member) is disposed proximate sliding plate 12 (an object) (see Figure 2). Furthermore, one of ordinary skill in the art would understand, when reading the specification and in view of the drawings, that the "inlet adapted to introduce gas" corresponds, for example in one embodiment, to gas feed 211 and the "outlet adapted to evacuate gas" corresponds for example in one embodiment, to vacuum conduit 213 (see, for example, Figure 2 and related description in page 10 of the specification).

Therefore, Applicants respectfully submit that claims 16-31 and 36-41 are in full compliance with § 112, second paragraph. Therefore, Applicants respectfully request that the rejection of claims 16-31 and 36-41 under § 112, second paragraph be withdrawn.

Claim Rejection – 35 USC § 103

The Examiner rejected claims 16-31 and 36-41 under 35 U.S.C. § 103(a) as being unpatentable over Smick et al. (U.S. Patent No. 5,898,179) in view of Kawata (U.S. Patent No. 6,038,015). Applicants respectfully traverse this rejection for at least the following reasons.

Claim 16 recites, *inter-alia*, “a sealing member disposed proximate an object having a substantially flat surface, said object being held by said second object table, wherein said sealing member defines an inlet adapted to introduce gas into a space reserved between said sealing member and said object, and wherein said sealing member defines an outlet spaced apart from said inlet, said outlet being adapted to evacuate gas from said space reserved between said sealing member and said object.”

Claim 36 recites, *inter-alia*, “a sealing member disposed proximate an object having a substantially flat surface, said object being held by said object table, wherein said sealing member defines an inlet adapted to introduce gas into a space reserved between said sealing member and said object, and wherein said sealing member defines an outlet spaced apart from said inlet, said outlet being adapted to evacuate gas from said space reserved between said sealing member and said object.”

Smick merely describes an apparatus used to control a workpiece inside a vacuum chamber. The workpiece is isolated from the atmosphere outside of the vacuum chamber by differentially pumped vacuum seals. Seal assembly 17 is made up of bearing and seal plate 19 and circular seal plate 20. Bearing and seal plate 19 of seal assembly 17 is separated from bearing and seal plate 12 by a gas bearing formed by an array of gas nozzles located on the surface of bearing plate 19. Bearing and seal plate 20 of seal assembly 17 is separated from wall portion 21 of vacuum chamber 24 by a gas bearing formed by an array of gas nozzles located on the surface of the bearing plate 20 (see col. 5, lines 28-61 in Smick). Therefore, in Smick “the sealing member” (seal assembly 17 and seal plate 12) is disposed proximate wall portion 21 of vacuum chamber 24. In Smick, the workpiece holder 10 (object table) for

holding workpiece 18 (object) is disposed inside the vacuum chamber 24 away from the seal assembly 17 and seal plate 12, i.e. away from “the sealing member.”

In contrast, the sealing member recited in claims 16 and 36 is disposed proximate an object held by the object table.

Furthermore, contrary to the Examiner’s contention, the gas bearing in Smick is provided on bearing plate 19 between bearing plate 19 and seal plate 12 and is also provided on bearing plate 20 between bearing plate 20 and wall portion 21 of vacuum chamber 24. Smick does not disclose, teach or suggest that the sealing member defines an inlet adapted to introduce gas into a space reserved between the sealing member and the object (the object being held by the object table) or that the sealing member defines an outlet spaced apart from the inlet, the outlet being adapted to evacuate gas from the space reserved between said sealing member and the object.

Kawata fails to overcome the above noted deficiencies of Smick. Kawata does not disclose, teach or suggest, *inter-alia*, “a sealing member disposed proximate an object having a substantially flat surface, said object being held by said second object table,” as recited in claim 16. Kawata does not disclose, teach or suggest, *inter-alia*, “a sealing member disposed proximate an object having a substantially flat surface, said object being held by said object table,” as recited in claim 36.

Consequently, neither Smick nor Kawata, alone or in combination, disclose, teach or suggest the subject matter recited in claims 16 and 36.


Therefore, Applicants respectfully submit that claims 16 and 36, and claims 17-31 and 37-41 which depend directly or indirectly from either claim 16 or claim 36, are patentable. Thus, Applicants respectfully request that the rejection of claims 16-31 and 36-41 under § 103(a) be withdrawn.

CONCLUSION

In view of the foregoing, the claims are now in form for allowance, and such action is hereby solicited. If any point remains in issue which the Examiner feels may be best resolved through a personal or telephone interview, the Examiner is kindly requested to contact the undersigned at the telephone number listed below.

All objections and rejections having been addressed, it is respectfully submitted that the present application is in a condition for allowance and a Notice to that effect is earnestly solicited.

Respectfully submitted,  
Pillsbury Winthrop LLP

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